

Canadian Journal of Psychology

THE JOURNAL OF THE CANADIAN PSYCHOLOGICAL ASSOCIATION

Volume 2, 1948

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Vol. 2, No. 1

Canadian Journal of Psychology

THE CERTIFICATION OF PSYCHOLOGISTS IN CANADA

J. S. A. BOIS

Montreal

SINCE Professor Bott presented his report on "Problems in the Certification of Psychologists" at the Annual Meeting of the Canadian Psychological Association in May, 1946, two committees have been active in the study of this urgent problem. One is a committee of the CPA, and the other is a committee of the Psychological Association of the Province of Quebec. In 1946-47 the writer happened to be chairman of both committees. The purpose of this article is to review what has been done to date, to bring into focus a few debatable points, and to offer suggestions. The following views and suggestions are entirely the writer's, and they do not commit any member of the CPA or PAPQ certification committees.

WHAT HAS BEEN DONE

It is in the Province of Quebec that psychologists have been most concerned with the problem of certification. Before the CPA was organized, practising psychologists in Montreal had formed a professional organization, "The Psychological Institute," which was granted a charter by the Quebec Government on June 8, 1936, under the third part of the provincial Companies Act. The psychologists who initiated this venture realized how important it was to establish from the very beginning good relations with the medical profession, and they had the good fortune of finding two medical men, a psychiatrist on the staff of a mental hospital, and a surgeon, director of a general hospital, who agreed to be charter members of the Institute and who took an active part in shaping its policies.

It was not long before the members of the Institute had to face most of the problems that are now being discussed in relation to professional practice and certification: problems having to do with relations with the College of Physicians and Surgeons, with psychiatrists, with fellow psychologists indulging in unfair competitive practices, with quacks who challenged them or wanted recognition by the Institute, problems having to do with qualifications of their own members, and with unethical practices harmful to the profession as a whole. Older members of the CPA

will remember that it was a member of the Institute who brought to the attention of the Association, at a general meeting in Montreal, certain questionable practices of a member of the Association and stressed the need for disciplinary measures. Depending on circumstances, the Institute solved their problems by various means. In some cases it was by personal contacts with officials of the other professional bodies; in others it was by moral suasion or pressure on individuals; in still others it was by the threat of legal action or by the dismissal of some of its own members.

Practising and teaching psychologists in Montreal have always been very alert in matters of professional practice. When the Psychological Association of the Province of Quebec was formed three years ago, it made the advancement of psychology as a profession one of its main purposes. It was from Montreal that a movement was started which brought about an examination by the APA of the procedures followed by a large American mail-order test organization.

The "Institut de Psychologie" of the University of Montreal is the department of psychology of that institution. Founded in 1942, it gives a training that is more definitely oriented toward the practice of the profession than is the training in other Canadian universities. At McGill University, the members of the Psychological Institute received constant encouragement from the late Professor W. D. Tait, then chairman of the department. In the course of last year, there has been the closest co-operation between the Certification Committee of the PAPQ and the departments of psychology of Montreal and McGill.

In 1946 the Executive of the PAPQ decided to prepare a list of psychologically trained personnel practising in Montreal, with a view to giving information to people who wanted psychological services. Members of the Association, if they wanted to be on this list, were invited to send in their names, their business addresses, their fields of work, and the range of their fees. But the Executive quickly realized that such a crude scheme was neither practical nor safe. Some procedure was needed to ascertain the competency of practitioners.

The Certification Committee went to work on the problem and submitted a report to the General Meeting, held in Montreal on April 19, 1947. This report is substantially the same as the one presented by the Certification Committee of the Canadian Psychological Association at the Annual Meeting held in Ottawa, on April 12, 1947.

The report to the CPA included a preamble that can be easily omitted from this discussion, and continued as follows:

7. Licensing is too far off in the future to demand attention at the present time, except that it should be kept in sight where decisions are taken concerning Certification, which is the immediate preparation to formal licensing. Certification is therefore our main problem at this stage.

8. It is realized that Certification is a provincial affair because (a) legislation to that effect is to be obtained from Provincial Legislatures, and (b) it is easier for local boards to verify the qualifications of psychologists located in their respective areas.

9. On the other hand, it is most desirable that, as early as possible, standards be identical or equivalent all across Canada, both for the prestige of the profession and for the convenience of individual psychologists who may want to go from one province to another. It is therefore suggested that the CPA define standards of training and experience for the certification of psychologists, and promote the acceptance of these standards by its affiliated associations.

10. It is suggested that no attempt be made by the provincial associations or by the CPA to obtain the legal authority to certify practising psychologists until the standards and procedures described below have been tried for two or three years, and revised in the light of actual experience. In the meantime, the CPA or the provincial associations could grant certificates on their own private authority, urging their members to respect them and to educate the public as to their meaning. This private certification is really a form of approval against definite standards.

11. It is felt that the CPA cannot set up a central Certification Board that would operate efficiently for all Canada, because the members of such a Board would have to depend exclusively on the information obtained from local representatives and would be a mere rubber stamp to their statements. It lacks the authority to appoint members of boards created by provincial associations or veto such appointments. In provinces where no association exists, or no certification board has been set up, the CPA could create boards of its own, until such time as a local association takes over.

12. It is suggested that:

(a) where an affiliated association establishes a certification board, at least one member of this board be a full member of the CPA;

(b) where regional boards are set up by the CPA, all members of the board be full members of CPA.

CERTIFICATION STANDARDS

14. The majority of your Committee suggests that three levels of certification be adopted with the following titles and initials:

(a) Certified Psychologist	C.P.
Psychologue Agréé	P.A.
(b) Certified Associate in Psychology	C.A.P.
Psychologue Adjoint Agréé	P.A.A.
(c) Certified Psychological Technician	C.P.T.
Psychotechnicien Agréé	P.T.A.

A minority accepts all above suggestions but the title in (a). The term Certified Consulting Psychologist has already been accepted by the PAPQ.

15. The requirements for each grade of certification are given below, beginning by the lowest grade. The requirements are given as minimum standards which can be made more exacting by local associations, if they deem it necessary. It must be noted that the titles given to the various courses required for certification could be labelled differently in some universities. It is the subject matter that counts, not the name under which it is recorded in the catalogue.

16. *Certified Psychological Technician (Psychotechnicien Agréé)*. The requirements are a B.A. or B.Sc. in Psychology or their academic equivalent, provided the candidate has completed the courses described below. Unless otherwise stated, a course means a minimum of sixty lecture-hours. A further requirement is that the candidate must be recommended by the department with which he took his degree, or by a certified psychologist under whom he had six months of practical experience.

(a) *One introductory course in psychology.*

This should cover a general survey of psychology to acquaint the student with the basic concepts and the terminology of the science.

(b) *One elementary course in experimental psychology, including statistics. 90 hours: 30 of lectures, 60 of laboratory.*

This should provide the student with an opportunity to make systematic observations (including measurements) with the aid of standard laboratory apparatus and material.

It should give preliminary training in the organization and treatment of data, the preparation of tables and graphs, and the writing of reports.

The student should be trained to calculate and interpret measures of central tendency and variability, norms, simple frequency graphs and at least one kind of coefficient of correlation, for instance rho.

(c) *One course in testing, including field work. 90 hours, half of which should be demonstration or field work.*

Principles of individual and group testing (age scales and point scales) with practical demonstrations. Tests of intelligence, aptitudes, and achievement, and personality inventories of the questionnaire type. Occupational interests inventories. This course to include lectures, demonstrations, and supervised field work.

(d) *One course in mental hygiene.*

The purpose of this course is to acquaint the student with the principles of normal personality development and of its most frequent deviations, and to give an outline of preventive and corrective measures to be taken for personal education or re-education.

(e) *One course in systematic psychology.*

This course to describe the various contemporary schools of psychology against the historical background of the development of the science through the ages, and in relation to allied disciplines, such as psychoanalysis, anthropology, sociology, economics, etc.

(f) *One of the various courses mentioned below for the higher levels of certification, with field work when required.*

17. *Certified Associate in Psychology (Psychologue Adjoint Agr   ).* The requirements are a Master's degree in psychology or its academic equivalent, provided the candidate has completed twelve courses in all, six already described for the C.P.T. level, and six to be described below. Further requirements are that the candidate must have one year of experience under acceptable supervision and must be recommended by the supervisor under whom he has taken his practical training. The courses are obligatory or optional as follows:

(a) *One advanced course in experimental psychology including statistics. 90 hours: 30 of lectures and 60 of lab. work.*

This course should provide an opportunity for the students to plan, carry out, and report upon individual or small-group experiments.

It should permit the further application and development of knowledge and skills gained in the elementary course.

(b) *One advanced course in psychological testing, including field work with groups and individuals. 90 hours: 30 of lectures and 60 of field work.*

This should provide considerable experience in administering and interpreting a variety of tests of the type described in the elementary course. The field work should provide some experience with projective techniques. It should also include familiarity with the construction of tests for special purposes.

- (c) *One course in physiological psychology.* This course to cover the study of the nervous system, the sense organs, the mechanism of nervous action, theories of localization, the circulatory system, the endocrine glands, nutrition and metabolism, the physiological bases of motivation, and psychosomatic relationships generally.
- (d) *One course in abnormal psychology.* 60 hours of lectures. This course should acquaint the student with the various forms of neurosis and psychosis, with psychoanalytical theories, with psychotherapy, and with psychosomatic problems.
- (e) *One 60-hour course in* (I) *child development, or*
(II) *personality development, or*
(III) *social psychology.*

The course in child development to cover the growth and development of the child, the techniques of child training, the handling of exceptional children, and some knowledge of educational psychology.

The course in personality development to cover the development of attitudes, emotions and interests, and the integration of personality from adolescence to old age.

The course in social psychology to cover the relations of the individual with various groups: family, school, gang, co-workers, institutions, community, etc.

- (f) *One course and field work (90 hours in all) in*
(I) *industrial psychology, or*
(II) *clinical psychology, or*
(III) *vocational guidance, or*
(IV) *market and opinion research.*

The course in industrial psychology to cover such fields as organization—particularly organization of personnel departments—job evaluation and merit rating, selection of employees, training of employees, hiring and exit interviews, conditions of work, internal relations and public relations, employee industrial counselling, appraisal of applicants for salaried jobs, training of supervisors, evaluation of key personnel at the executive level, training in human relations of executives taken individually or in groups, and writing of reports to management on such activities. The course in clinical psychology to include personality diagnosis and appraisal, interview and counselling techniques, psychological retraining techniques, knowledge of psychosomatic diagnosis and of therapeutic techniques, choice of tests that apply, and integration of findings, writing of reports.

The course in vocational guidance to cover appraisal of education, experience, general ability, special aptitudes, personality and interests against careers and training facilities available, choice of relevant test batteries, interview techniques, integration of findings, and writing of reports.

The course in market and opinion research to cover analysis of sales data, choice of samples, preparation and testing of questionnaires, simple and intensive interview techniques, qualitative and quantitative treatment of data, writing of reports and interpretation of results in terms of sales or production policies. Opinion research to follow a parallel course, with emphasis on attitudes, their verbal and behavioural expression.

N.B.—For Associates specializing in industrial psychology, or market and opinion research, the obligatory courses mentioned in 16 (c) and (d) could be substituted by advanced courses in psychology or in allied sciences, such as education, economics, business administration, statistics, etc.

18. *Certified Psychologist (Psychologue Agréé).* The minimum requirements are: a Ph.D. in psychology or its academic equivalent, plus two years of professional ex-

perience or regular internship. The Certification Board is to have discretionary powers in evaluating foreign Ph.D.'s, the equivalent to the Ph.D. degree, and the two years of experience.

The report of the PAPQ committee included a fifth choice in paragraph (f) of the requirements for Associate in Psychology. The option is *educational psychology* and it is described as follows:

The course in educational psychology to cover a thorough study of the learning process, transfer, achievement tests and their construction, evaluation and organization of curricula, distribution of courses at all levels, problems of discipline, development of the student's personality by individual counselling and by the scientific management of groups, etc.

The other differences between the CPA and the PAPQ reports are of minor importance, except for the concluding paragraphs of the PAPQ report, which read as follows:

Your Committee further suggests that a Certification or Approval Board consisting of five members, with a quorum of three, be appointed by the Executive at the earliest date possible.

The members of this Board should be full members of the Association who meet the requirements for suggested status of Consulting Psychologist.

This Board should evaluate academic qualification, equivalents to academic qualifications, and professional experience, set and administer examination of candidates of the three levels of certification, in cases where it deems it necessary.

This Board should deliver interim certificates for all degrees of certification.

Your Committee also suggests that a fee be charged for evaluation and/or examination, and for the issuance of certificates.

Your Committee acknowledges that standards of training and experience are only one aspect of the problem of certification and eventual licensing. Our activities were limited to this aspect, but we urge a continuance of the work in such fields as ethics of the profession, discipline, and relations with neighboring professional bodies, particularly medicine.

In September, 1947, the PAPQ appointed Fr. Noel Mailloux as its representative to the annual meeting of the Conference of State Psychological Associations. On his return Fr. Mailloux recommended that the provincial association apply for its affiliation with the Conference, and reported that the OPA would probably apply for it. The Executive quickly took action on this recommendation, in the desire to exchange views with the States' organizations and to establish standards equivalent to theirs.

The writer knows of little else that has been done to implement the recommendations of the CPA and PAPQ Certification Committees.

In the meantime, the problem has grown acute with threatening speed. People who have no degrees at all, or who have degrees well below the standards we are discussing, advertise in the papers, have their names listed as psychologists in the yellow pages of the telephone book, pose as psychologists in public addresses sponsored by well-established organizations, and gain recognition in the official directories of such public bodies as Chambers of Commerce. Some members of our associations advertise

their memberships as a guarantee of competency in the applied field, some use their Associate Membership in the APA for the same purpose. Some psychologists advertise their services as agents of placement. Appointments are made by government services, by school commissions, and other public bodies, and our associations are not even consulted with regard to general standards or the individual standing of candidates. Better Business Bureaus clamour for reliable information on professional standards and ethics, on what to think of so-and-so or of such-and-such an organization. Large business organizations throw out self-certified psychologists, whom they had taken in good faith a year or two before.

The situation is bad; it is growing worse every day. There is a pressing need for action.

DEBATABLE POINTS

At the 1947 meeting of the CPA two debatable points were raised. The first one dealt with the certification of psychologists engaged in teaching and research. When the report was submitted to the membership, the Committee had not reached an agreement on the matter, and no mention was made of it in their written statement. But it remains a very much contested issue. The second point was raised at the meeting itself; it dealt with professional ethics and discipline.

On the first point it would be easy to start all over again the discussion on academic versus applied psychology, to create two opposing camps, and to bring about a deadlock or a split. But what is to be gained? Why not look at the facts of the situation, instead of arguing about general principles and getting into an emotional trance?

First, we must take good note of the paragraph of the report that deals with the requirements for the top level of certification, that of the Consulting Psychologist. It is clearly stated that "the Certification Board is to have *discretionary powers in evaluating foreign Ph.D.'s, the equivalent to the Ph.D. degree, and the two years of experience*" (italics mine). Therefore nothing prevents academic psychologists from applying for certification if they want to, and nothing prevents the Board from granting certification in each individual case.

Will many academic psychologists apply for certification? This I cannot say. How many of them feel that a certification diploma will add to their prestige in the university and outside, to their freedom to act on committees and commissions, and to their earning power? How many feel that, because there is neither certification nor licensing as yet, they are confused with quacks and incompetents? How many have, in the course of the past year, gone through some very unpleasant personal experiences that caused them to exclaim: "Oh, I wish we had certification! Then I would know what to do, what to say. Then I could protect this client, shove aside this unfair competition, take a definite stand with this firm

or this organization." How many have applied for certification by the American Board of Examiners in Professional Psychology? How many feel that the fee of \$50.00 is an expense that will bring adequate returns?

There are not many full-time or part-time practising psychologists in Canada who have their Ph.D. and two years of experience. It would give them comfort and increase their prestige if a certain number of university professors, outstanding by their achievements in war and in peace, agreed to join their ranks. This would create a more weighty professional body and foster a closer co-operation between the profession and the university departments.

But is it necessary that all psychologists engaged in research and teaching be certified to practise? Has their experience in the lecture room and in the laboratory prepared them adequately for the practical work of the consultant? Is their viewpoint that of the practitioner? For instance, is the science of personality development and of abnormal psychology one and the same as the art of psychotherapy? To take examples from other professions: has the research engineer the same function as the works manager? Has the physiologist the same skills as the family doctor? Is the role of the economist the same as that of the investment broker? Of course, the three practitioners are better practitioners if they have a sound knowledge of the science that bears on their professional problems, and the three scientists or technicians are interested in the practical applications of their own work. It remains, nevertheless, that no one can keep up with more than a limited number of primary interests. Within the medical profession, you have specialties. In psychology itself, the American Board of Examiners issues certificates for three distinct fields. Is there any harm in drawing a distinction from the very beginning between the field of teaching and research on the one hand and the field of practice on the other? Even in medicine, you have M.D.'s who have never applied for a licence to practise.

I do not propose to discuss the second point of debate, viz., ethics and discipline. It would be unfortunate if the discussion of problems relating to certification were again delayed or blocked by over-zealous members who demand a code of practice before we have determined whether we shall have recognized practitioners. By limiting itself to certification, the CPA Committee followed Professor Bott's suggestion to give priority to this problem. And the Committee members know how much work and personal expense this assignment demanded.

There is another point which is also important. It is the question of accreditation of institutions that give training, both didactic and practical. The 1947 report of the Policy and Planning Board of the APA states that accreditation "is primarily a protective device for three groups of people,—the public, the profession and the student."

There is also the problem of the certification of people with M.A. degrees. It is the opinion of the same Board that "M.A. degrees awarded for lower professional training of the psychologist should be discontinued." The CPA Committee report gives these people an intermediary standing and suggests the title of Associate in Psychology. Is it really practical? Is it wise to make a transitory situation permanent? Why should students exert themselves, up to and past the Doctorate, when they can make a living—as psychologists—with a truncated course? What of graduate students who manage to scrape through their M.A. studies, but whom the department does not deem acceptable for training to the Ph.D. level?

These problems, and a host of others, demand creative thinking, constructive discussion, and action. This brings me to a suggestion that is not original by any means, but which has gradually imposed itself upon my own mind in recent months.

SUGGESTION

It is evidently difficult for our present associations, Canadian or provincial, to deal effectively with this problem. I wonder if the difficulty is not due in part to the fact that such a problem is not directly within their field. The medical associations and the medical licensing bodies are two different types of organizations, are they not?

Heinz Werner's concept of the growth process, as phrased by Gardner Murphy, assumes three developmental levels: (1) a level of global, undifferentiated mass activity; (2) a level of differentiated parts, each acting more or less autonomously; (3) a level of integrated action based upon interdependence of the parts.

Let us apply this concept to the development of psychology as a profession. Our association is at the first level, that of global, undifferentiated mass activity, reacting as a whole to stimuli with which it cannot cope adequately. We are still far from level three. We have not the integrated action based upon the interdependence of departments of psychology, training institutions, psychological associations, and licensing bodies, corresponding to schools of medicine, hospitals, medical associations, and medical colleges. Should we remain at level one? Should our associations, as presently constituted and operating, assume functions that demand more differentiation than they are capable of?

My feeling is that our normal growth is bringing us to level two. Our certification bodies should be independent of the association. The APA has already recognized this, and the American Board of Examiners in Professional Psychology has been created.

The advantages are many. One has struck me as very important. In the form that is signed by the applicants for certification we read:

I hereby make voluntary application to the American Board of Examiners in Professional Psychology, Inc. for the issuance of a certificate as a specialist in: (check one)

- a. Clinical Psychology ()
- b. Personnel Psychology (Educational) ()
- c. Personnel Psychology (Industrial) ()

and for examination relative thereto, all subject to and in accordance with the rules and regulations of said Board. Upon the issuance of the certificate I agree to and do become bound by the ethics of professional psychology and the By-Laws of the American Board of Examiners in Professional Psychology, Inc. insofar as applicable.

I agree to disqualification from examination or from the issuance of a certificate, and to forfeiture and redelivery of such certificate in the event that any of the rules governing examination and issuance are violated by me or for any of the causes set forth in the by-laws of the said Board.

I agree to hold said American Board of Examiners in Professional Psychology, Inc., its members, officers and agents and examiners, free from any damage or claim for damage or complaint by reason of any action, they, or any of them, may take in connection with this application, the attendant examinations, the grade or grades with respect to any examination, and/or the failure of the said Board to issue me such certificate.

This protects the Board and gives it disciplinary powers that our associations do not possess and do not need.

Because of the fees it charges, this Board can quickly become self-supporting. This is important also.

My suggestion emerges from these facts. It is simple. Let us create a Board of Professional Examiners, sponsored and recognized by our associations, but independent of them in its finances and its activities. If there are enough practising psychologists in Canada who realize that certification is an urgent problem that concerns them more than anyone else, let them pool their resources to finance the setting-up of such a Board.

This, I think, would expedite matters.

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RESEARCH PLANNING IN THE CANADIAN PSYCHOLOGICAL ASSOCIATION

E. A. BOTT

University of Toronto

THE Association continued its Committee on Research Planning from last year into 1947-48 with further support from the National Research Council, and with certain changes in the Committee's form and membership. Previously the main committee consisted of eight members from universities centrally located, with additional corresponding members in other centres. This year, in order to facilitate wider representation for exchange of views, it was thought advisable to establish separate eastern and western sections. Membership for these sections, as nominated by the Executive and the President, was announced in this Journal last September. Since a report from the Committee was not published last year, this interim statement will refer cursorily to the Committee's work last session as well as to certain activities of its Eastern Section in two meetings held so far this year (July and November). A fuller report will be due the Association at its Annual Meeting in Winnipeg in May, 1948.

The terms of reference for the Committee on Research Planning were never entirely clear. Created after the war, its main task for peace time was to find some possible form of permanent relationship between our Canadian Psychological Association and the National Research Council in Ottawa. During the war an informal connection had existed to foster research relating to personnel selection for the services, and when the war had ended there appeared to be need for studies of the human factor in other federal fields as well. Initially then the hope was to develop through the earlier beginning under the N.R.C. a broader basis for psychological research and training fellowships under government sponsorship. Besides this task of establishing permanent federal contact, the Committee was presently asked by the Executive to indicate what phases of our subject in the view of Canadian psychologists were of major importance at this stage and most in need of research.

Although both these tasks concerned research and planning, they nevertheless were distinct questions in principle. Thus, the first pointed directly to practical problems such as various departments of government might wish to prescribe for investigation (through N.R.C. auspices), whereas the second would refer to any fields which research psychologists (mainly in universities) might deem significant and wish to study as they saw fit. While these two interests might coincide to some degree, it is clearly conceivable that they might also conflict, for example, by competing for workers if the supply were too short to meet both purposes. In accordance with its instructions the Committee endeavoured to canvass both approaches, beginning with our original commission, viz., to stimu-

late psychological research in federal government settings under the N.R.C.

This objective was our main activity in 1946-47. The Committee through certain of its members consulted with the technical staffs of several federal departments (Labour, Defence, Health, Veterans' Affairs, Secretary of State, Civil Service Commission, and others) to ascertain whether these branches saw a place for psychological research in their work and would wish to develop suitable means, perhaps through the N.R.C. The result of those enquiries was twofold. On the one hand, the response from federal Departments was considerable and distinctly in the affirmative. On the other hand, our Association at its open Annual Business Meeting debated with certain misgivings the wisdom of mortgaging our limited resources for psychological research by patterning them too closely to suit current requirements or policies of particular departments of government. Not only the present dearth of research personnel, but even more, the need for safeguarding their academic freedom, were voiced as reasons why our Association should be cautious about endorsing steps that might limit the discretion of any members in their choice and evaluation of research problems.

This was a sound precaution but in the light of further experience it seems a false alarm. Any potential dangers our initial approach in terms of practical problems may have courted are no longer ground for hesitation. The fault lay in our procedure, not in the problems. If there was real danger in the Committee negotiating directly with federal departments on behalf of the Association, this is now overcome through the federal appointment of Dr. N. W. Morton last spring to be a full-time psychological advisor who would have wide contacts at Ottawa. Attached to the Biological Division of the Defence Research Board, he is also privileged to consult with any federal units which have psychological problems, and at the same time he makes liaison with Association members attached to universities for their assistance as problems may require. Contacts with departments at Ottawa which our Committee had begun he has already taken over and is further developing in his official capacity as psychological consultant. It will remain for our Association members, acting individually or in groups, to make such technical contributions as they can when invited to do so. As a member of our Eastern Section, Dr. Morton affords us the benefit of his close contact with federal officials and their current problems, while our Committee remains as free as other members of the Association in regard to commitments or choice of research fields.

The second question proposed to our Research Planning Committee (i.e. to define in general terms the main areas of psychological interest requiring research) is perhaps more important as well as more difficult to answer. It is a challenge in ideas, rather than in administration. The an-

swer that the Committee can offer at this stage is at best a partial and somewhat hesitant one. Moreover, this characteristic may continue, which would mean that a Committee as such is perhaps not the best means for formulating worthwhile researches which have yet to be undertaken. What is requested of our Committee, in short, is a blue-print for psychological research in the immediate or near future, as envisaged by some of our psychologists in Canada who represent a variety of interests and circumstances.

Our Eastern Section has been greatly aided in its thinking by the views of Professor R. B. MacLeod. In recently returning to Canada and McGill University he brings not only a wide academic and war experience but an unusual gift of formulating fields of interest and showing how they stand in perspective. Thus, at our July meeting he outlined in general terms what he conceived to be principal areas to which psychologists (among other scientists) could and should make contributions. His convincing presentation, we are glad to note, is now available in the December issue of this Journal. It was agreed in July that five of our members should each select one or more of the above areas in which he was personally interested with a view to enlarging on the content that research problems in such fields should include. These preliminary statements were presented and discussed at our November meeting. It was then felt that some of the points each author offered might be of interest to readers of the Journal. Four of these condensed statements are appended; the fifth by N. Mailloux on "Research Planning in Clinical Psychology" has been expanded to appear as a separate article. The statements which follow should not be taken as more than passing suggestions which aim at frankness rather than completeness; they deliberately stress blank or little-known regions as well as some promising paths for research.

I. REPORT ON EXPERIMENTAL, PHYSIOLOGICAL, AND COMPARATIVE PSYCHOLOGY

D. O. HEBB

McGill University

A. This report questions its own value in promoting fundamental research and the value of any committee that does not have funds to grant.

B. To survey the current situation. Academic or ivory-tower psychology—experimental, physiological, and comparative (and including an important part of social psychology)—was the goose that laid the golden egg of applied and clinical methods. In Canada, if this goose is not dead, it is very skilful at feigning death. The glaring lack in Canadian psychology is in plain, old-fashioned, intellectual curiosity; hence the lack in academic research to parallel and stimulate research in practical methods.

Such research at present is not being done. An occasional study of some isolated "problem" derived from pioneering work elsewhere does not fill the need for a continuing persistent interest in theory, for a *growing* and *living* body of research in each department of psychology—the kind of research with which every student should at some time or other come in contact.

C. As a personal prediction, I should say that the next ten to fifteen years will see a great development of theory, in which Canadian psychology can have its part. The prediction is based on an estimate of the effect of new physiological conceptions on psychology, and developments within psychology itself.

D. First, the physiological and anatomical work of Lorente de Nó, Dusser de Barenne, McCulloch, and others has implications for psychology that are clearly shown, for example, by such work as the important paper by Marshall and Talbot on neural mechanisms in vision and a new theory of sensory acuity (Biol. Symposia, VII, 1942); this work also permits a new interpretation of the criticism of connectionism by Lashley and the Gestalt school, opening a new basis for theorizing in physiological psychology.

E. Secondly, at a purely psychological level, in fifteen years the work of Hull will either have become clearly *the* line of attack, or be obviously sterile. A body of experimental data, also, has been accumulated that may make new syntheses possible on a much broader basis than Hull's. In particular, the work of Senden, "Raum und Gestaltauffassung bei operierten Blindgeborenen" (. . . 1932), of Riesen in *Science*, summer, 1947 and APA paper, 1947, and of Lorenz (*J. Ornithol.*, Leipzig, 1937), all seem to call for a radical reorientation of psychological theory in the field of perception and of learning, and re-examination of our assumptions concerning the relation of early to later behaviour. There may be much more generalized transfer from infant experience and resistance to retraining than would be suggested by current theory. This possibility is obviously relevant to theories of mental illness, and of intelligence; it has an obvious practical significance.

F. Is there any reason why Canadian psychologists should wait for others to work these problems out?

II. REPORT ON SOCIAL PSYCHOLOGY

J. D. KETCHUM

University of Toronto

A. *We are not producing researchers in Social Psychology.* Little significant research is in progress in Canada in any phase of our subject as compared with the number of students "taking" psychology. (An index figure would be interesting for comparable branches of science, natural,

biological, social). Psychology is especially weak in the social field. Nor do we seem to be producing graduate students with the ability, training, drive, and direction of interest required.

B. Suggested causes:

1. Research in social psychology is definitely more difficult than typical laboratory studies (animal, experimental) or statistical (correlation, etc.). Concepts are poorly defined and techniques lacking; training requires longer time.

2. Undergraduate teaching is primarily in terms of content and theories, not as an experimental discipline. This gives false perspective and little skill or experience.

3. Graduate training also fails to give satisfactory results:

(a) Students are unprepared for research by undergraduate training.

(b) Fields with better defined concepts, standardized techniques, and job prospects get preference.

(c) Graduates specializing in psychology are often appalled at the scope and complexity of social problems, and unable to break them down into meaningful components.

(d) Contact with anthropology, sociology, etc., often makes psychology graduates doubt whether psychology has any substantial contribution to make in the social field.

(e) No significant research is in progress on the part of the teaching staff.

Point (e) above is a major key to the problem. Reasons are familiar; lack of time, lack of research emphasis in staff's own training (often taught by philosophers to undergraduates). Students refer to the contrasting atmosphere in such departments as physics. When long-term research is actually in progress in a department, graduate students are attracted to the field, learn its problems and possibilities, participate early in minor research, and may ultimately be stimulated to go ahead on their own initiative. There is probably no substitute for this actual practice; research is produced by a tradition and atmosphere of research and the social field is no exception.

C. Current needs:

1. Better arrangement of teaching time-tables, especially for younger members of staff.

2. Undergraduate courses in social psychology taught with emphasis on research findings and research problems.

3. Substantial fellowships at the post-M.A. level so that students can continue in order to get the necessary training for productive research in this field.

III. REPORT ON DEVELOPMENT AND EDUCATIONAL PSYCHOLOGY

K. S. BERNHARDT

University of Toronto

Research in these areas as in most others waits more on personnel and practical facilities than it does on problems. Considerable work on educational research problems is being done in special research units such as those at the Ontario College of Education and the University of Montreal, but there are many unsolved problems; and additional research centres are needed in Canada.

Some of the more obvious areas for research are:

- (a) Developmental—Establishment of developmental norms with appropriate measures of individual differences.
 - Studies on the maturation process and its relation to learning.
 - Studies on the nature of learning (human and animal).
 - Improvement of methods for assessing development, especially social and emotional development.
 - Investigation of problems peculiar to various life stages, such as infancy, preschool, preadolescence, adolescence, middle and old age.
- (b) Educational
 - Determination of relations between educational experience at various stages and the behaviour and personality of the individuals concerned.
 - Investigation of the details of educational procedures including methods of instruction and motivation.
 - Evaluation of methods of assessing achievement in educational settings and their predictive significance.
 - Studies on the relationship between aspects of the person, his vocational choice, and his general adjustment.
 - Studies of special groups (e.g. high and low ability, sensory handicapped, etc.)
 - Studies of special areas in education (e.g. of family life, camp life, parent education, etc. or of musical education, art education, etc.)
 - Studies on the methods and results of vocational guidance in schools.
 - Studies on selection of candidates for various university courses.

—Studies on the process of university education
(Selection, kinds and amounts and causes of
failure, etc.)

These are only examples of types of research areas in which Canadian psychologists could make contributions.

Settings for research studies are readily available for most kinds of subjects with the possible exception of infants and preschool children. There is need for research settings such as the Institute of Child Study to be more widely distributed across Canada.

There are at least three types of research programmes: (1) research by individuals in their own selected areas of interest; (2) longitudinal studies carried on in settings in which there are both available subjects and a staff with sufficient continuity to carry the study through years or decades; and (3) co-ordinated, co-operative researches in which, for instance, groups or individuals in different parts of the country gather information on some area of education and pool this information.

How many Canadian psychologists engaged in teaching are examining their own educational activities? How much stimulation of research is being given in our teacher-training institutions? How much leadership are Canadian psychologists giving to the teacher group to engage in research or to develop the research attitude?

IV. REPORT ON PSYCHOLOGICAL TESTING

W. LINE

University of Toronto

A. Two main approaches may be distinguished in test-research to date:

1. Systematic search for fundamental psychological bases of mental measurement.
2. Empirical operational procedures for matching individuals or groups. Both approaches have stimulated the creation and refinement of valuable statistical techniques. Both have contributed to valid measurement in the general intelligence field.

B. Beyond the field of general intelligence, the systematic search has not been, as yet, very productive. Perhaps our statistical creations such as factor-analysis will be more useful when we know what to observe as indicative of more basic psychological variables. In other words, the first approach has been somewhat premature.

C. Measures of aptitude, interest, etc., are in consequence largely on an operational basis—with the grave limitation of confused operational criteria.

D. Operational criteria appear to be more clear in the field of learning, especially the learning of skills and particular forms of knowledge. Job analysis (and pedagogical analysis in general) assists in this empirical clarification. Hence, in practice, Selection Testing usually has a close partnership with Training as was widely recognized in military services.

E. For aptitude measurement (in the "guidance" sense) rich interpretations have come from psycho-dynamics and from clinical insights into motivation. The dynamic aspects of interest, preference, and ability-fields have almost supplanted the older, structural views of ability-testing.

F. This promising change in outlook probably owes its achievements to the fact that any psycho-dynamic approach is essentially a personal-social psychology.

G. At this stage, therefore, research in measurement may be said to depend, at least in part, on a willingness to discard the artificial distinction between individual and social psychologies, in the interests of a systematically formulated personal-social basis. A closer partnership is required in future between social psychologists and those who seek to test or appraise individuals.

RESEARCH PLANNING IN CLINICAL PSYCHOLOGY

N. MAILLOUX

University of Montreal

NOWADAYS, before a clinical psychologist attempts to define his field of research and interest before his colleagues he often has to overcome that feeling of insecurity which was characteristic of the psychiatrist of a few decades ago while he was talking to the rest of the medical profession. He is likely to expect to be considered not a true scientist but a practitioner, not a research scholar but a sort of subjectivist more or less unrespectful of precise and rigorous methods. Since he is dealing with patients or clients instead of subjects, the most generous will agree to call his activity an art, but hardly anyone will think of it as experimentation. It is indeed not unlikely that we find here a valid explanation of the unfortunate reactive attitude which thrusts the consultant psychologist towards separatism.

May I say here that those who founded the Quebec Psychological Association always regarded as their most challenging task the preventing of such a cleavage among the members of the profession. Is it a utopian hope that, through repeated contacts and close collaboration, our most promising graduates will form the habit of conducting research in keeping with reality or of handling their daily practice without losing their investigating bent?

It is with the above in mind that I submit the following suggestions concerning the undertaking of research in the field of clinical psychology. In order to give this outline a sufficiently general import, I shall deliberately avoid emphasizing my own personal interests and the various projects which have begun to materialize in my immediate environment. For the sake of clearness and brevity, remarks will be grouped under the four headings: I. General Methodology; II. Basic Problems of Clinical Psychology; III. Elaboration of More Efficient Procedures; IV. Available and Required Facilities.

I. GENERAL METHODOLOGY

In mentioning general methodology as a major point to envisage in connection with the pursuit of research in the clinical field, I intend to refer to some aspects of training bound to have a definite influence on the progress of our work, namely:

1. Since the individual is the prime concern of clinical psychology, students should be trained to think of him not exclusively in terms of distribution curves or graphs, averages and means, but also to visualize with great precision his unique personality structure.

2. Since clinical psychology is concerned mainly with an understanding of why one behaves in a certain way, normal or abnormal, it cannot

be satisfied merely with a quantitative analysis permitting one to place an individual in his proper niche on the distribution curve. Our students must learn to attach as much importance to the qualitative as to the quantitative analysis and interpretation of behaviour and to develop the skill required for carrying out such work. Apart from statistics, they will have to study quite seriously the psychological dynamics of personality which represents a set of forces interrelated in action.

3. As with the physician, the clinical psychologist must make use of quantitative laboratory tests for diagnostic, comparative, and evaluative purposes, but this does not excuse him from the objective interpretation of his subject's personality, inner conflicts, maladjustments and, as G. W. Allport would put it, of his intentions whether habitual or actual. This, of course, requires on the part of the students both a reasonable amount of practice and the systematic and critical assimilation of much theory.¹

II. BASIC PROBLEMS OF CLINICAL PSYCHOLOGY

There are many research problems confronting the clinical psychologist working in the neurological or the psychiatric clinic. Those problems are too specific and too closely related to personal interests to be considered here. So I will rather mention the problems which have general significance for all those who are practising clinical psychology and which require immediate attention on the part of the research workers in the field:

1. The adequate relationships between the personality of the child as it is formed in the family setting and the adult personality. The psychological conditions which make for normal parenthood.

2. The conditions of the individual's adjustment in the sphere of love, marriage, and sex, or the conditions that will insure a maximum amount of happiness and a minimum degree of insecurity in marriage. Such studies should reveal the psychological factors that will predict, as far as is humanly possible, failure or success in marriage.

3. The conditions of the individual's adequate socialization, expressing itself, on the one hand, in various social wishes such as intense desire for the common good and progress of the community, peaceful collaboration, productive leadership and participation, and, on the other hand, in the control of antisocial wishes such as aggression, acquisitiveness, desertion, and dominance.

4. The conditions of the individual's integration in his vocational sphere, the relevance of personality factors to an assessment of the individual's abilities and capacities with the aim of determining when his best energies will be mobilized, when something will interfere with his functioning, when he is to work at all.

¹Cf. Margaret Ives, "Interrelationship of Clinical Psychology and Psychiatry" (*Journal of Clinical Psychology*, 2, 1946, 146-50).

5. The interrelationship obtaining between the quality of values accepted by an individual, his level of self-esteem, and his degree of ego involvement.

6. The interrelationship obtaining between ontogenetically established and more or less fixed character pattern and the intentions, habitual or actual, as dynamic creative orientations.

7. The conditions that will avert insecurity in passing from the home to the school environment and from the school to the work environment; the emotional factors making for or interfering with successful adjustment.

8. The elaboration of a more refined classification of border-line personalities with regard to various educational therapies.

9. The elaboration of a precise mental hygiene programme for specific categories of people who are especially in need of it, e.g.: the physically handicapped, the feeble-minded, the aged, the tuberculous, the epileptic, etc.

10. The dynamic factors involved in various scholastic disabilities, or contributing to various kinds of academic achievement: teaching, research, etc.

11. The problem of alcohol and drug addiction.

III. ELABORATION OF MORE EFFICIENT PROCEDURES

So far as the procedures needed for personality diagnosis or evaluation and for treatment or educational therapy are concerned, it is quite evident that they constitute for the clinical psychologist an almost unlimited domain for research. For instance, let us mention a few problems of immediate interest:

1. Instead of abandoning too easily our old questionnaires, it might be profitable to consider Tomkins' suggestions: "If we were to relinquish, temporarily, our aspiration to employ the questionnaire as a completely adequate basis for valid inference and study the conditions under which the individual is likely to rate himself accurately and the conditions under which he will deceive himself or others, then ultimately we might make important contributions to the science of personality and at the same time be enabled to employ the questionnaire method with greater assurance."²

2. We should not hesitate to invent and try new methods intelligently, without aiming prematurely at perfect standardization. Here again, Tomkins' suggestion sounds like good common sense: "We would, for some time, have to relinquish our attempt to prove that the test was valid and turn our attention to the problem of why it was either valid or invalid. Frequently more can be learned from invalid test results than from valid inferences."³

²*Thematic Apperception Test* (New York, 1947), 19.

³*Ibid.*, 19.

3. The client's verbalization of his problem might turn out to be an extremely significant diagnostic test if only it were carefully studied. The same might apply to the material obtained through an hour of free association.

4. An adaptation of therapeutic procedures to educational purposes and needs should interest the clinical psychologist.

5. The possibility of combining group and individual therapy in the most profitable way has yet to be studied.

6. The possibilities and limitations of spontaneous group therapy, as in the case of Alcoholics Anonymous, might be explored. An application of the same method to delinquents might be attempted.

IV. AVAILABLE AND REQUIRED FACILITIES

So far as I know, available facilities for research in clinical psychology are rather meagre if not practically non-existent in Canada. Here, I think we must express our gratitude to Dr. William Line for the new possibilities he is opening for us in the D.V.A. organization. Mental hygiene clinics, child guidance centres, and nurseries are at present of little avail for research.

We require facilities not to work on the child alone but on the whole family.

This report was originally written, not for publication but for presentation at the November session of the CPA Research Planning Committee. Its aim, therefore, was restricted to delimiting the scope of a few hours' discussion. To my colleagues from other Canadian universities, I am particularly grateful for their numerous and illuminating comments on that occasion. At their suggestion, I have agreed to send these few pages to the Journal leaving them in their skeleton form.

THE EVOLUTION OF A CLINICAL PSYCHOLOGIST¹

MOLLY R. HARROWER

Psychological Consultant, United States Department of State

THE title, "The Evolution of a Clinical Psychologist" has, I am afraid, all the earmarks of the type of autobiographical ramble indulged in by the after-dinner speaker. This, however, is not my intention. The few pertinent personal details can be dismissed in a paragraph. The choice of the words "a psychologist" rather than "psychologists" or "psychology" is to point up my belief that we have at the present time, *no discipline of Clinical Psychology* in the same sense that we have Medicine, Law, Dentistry, or Teaching. And that there *are* in consequence *no uniformly trained Clinical Psychologists* in the sense that there are doctors, lawyers, dentists, or educators. To date, we are entitled to use the words "*clinical psychology*" only to differentiate an area of interest or activity other than the academic, to which the academically trained psychologist has devoted himself; that is, an interest in particular persons—in patients, maladjusted children, delinquents, and adolescents. And we have in the field a relatively small group of individuals, grounded in theory and experimental techniques, who have exposed themselves to dynamic psychiatry, immersed themselves in some medical atmosphere, and faced the question of therapy through personal analysis, but who have achieved these indispensables by diverse methods and often with great difficulties. Such persons, largely by virtue of their own haphazard training and the obstacles which they have had to overcome, have emerged with a pretty clear conception of what professional training in the field should ultimately include.

As a reference point, let me state here that my own background included four years of "pure" research in visual perception, memory, and thinking, and two years of college teaching, prior to a thorough academic doctorate. Thereafter, in an effort to reach my goal, which I may define as the relevant evaluation of personality in order to throw light on psychic and somatic disturbances, I tried three years of guidance and personnel work, four years of total immersion in the organic atmosphere at the Montreal Neurological Institute, three years as research psychologist in a Department of Neuropsychiatry, and two years free-lance teamwork with my medical colleagues here in New York. Thus it is from the standpoint of these twelve years of post-Doctoral groping that I speak now of the development in my own mind of the concept "clinical" as pertinently attached to that of "psychologist." I am concerned with the thought:

When does a psychologist evolve into a clinician?

This is a question which cannot be answered in the classroom, nor can the evolutionary phenomenon occur therein. It is born out of the actual

¹This address, which was read as a paper at the 1947 Annual Meeting of the Canadian Psychological Association in Ottawa, is reproduced by permission of the author from *Training in Clinical Psychology: Transactions of the First Conference March 27-28, 1947*. New York: Josiah Macy, Jr. Foundation, 1947.

struggle to find a place in an essentially alien discipline. It is a state of mind, or, like the Kingdom of Heaven, it is within us. Let me postulate, therefore, some of the most important attitudes and attributes which entitle the psychologist to put a "C" on his psychological sweater.

I. A psychologist may be considered clinical when he is able to take a responsible and unemotional stand on the all-important question of *therapy*; a stand which takes into account that by no stretch of the imagination can it be argued, or by wishful thinking asserted, that there is anything in the regular Ph.D. in academic psychology per se which remotely equips him to do therapeutic work; a stand, however, which does not evade the pressing social issue by blind obedience to the letter of the existing law; a stand by which he shows his willingness to put his own house in order through as rigorous and exacting analytic means as are available to him; a stand which assumes the responsibility to awaken in all his students or younger colleagues the inner need for availing themselves of the maximum degree of self-knowledge before attempting to handle the lives of others; a stand which embodies his belief in the validity of his evaluation techniques, so that he is willing to put them to the test for their intrinsic, therapeutic worth, assuming the responsibility of developing, if necessary, a new therapeutic approach, a new method of handling appropriately selected personality disturbances.

II. The psychologist is entitled to the epithet "clinical" when he ceases to consider himself as the infallible psychodiagnostician—God's gift to the psychiatrist! Or, on the other hand, when he is past the stage of thinking of himself as "successful" only in terms of the number of times when his diagnoses equate with those of the psychiatrist, being elated when his batting average rises, plunged into the depths of despair as his "diagnoses" differ.

Unpopular though this suggestion may be, I personally would like to see even the word "psychodiagnostician" dispensed with, in that it is somewhat pretentious and inaccurate! Actually, psychiatrists do not need the services of psychologists, clinical or otherwise, to make a diagnosis, except in a very few cases. While it may be spectacular, for instance, to call attention to the presence of organic cerebral pathology when none has been suspected, and to have it verified by X-ray, while it may be satisfying to validate "objectively" the psychiatrist's opinion of an underlying schizophrenic process in the demonstrable deviations which appear in the pliable materials of the projective techniques, such cases, though gratifying, form a very small percentage of those a psychiatrist sees or refers.

I would prefer, therefore, for the Clinical Psychologist to emerge in a more positive role, in that of what I might call the assessor, surveyor, or map maker of the dimensions and depths of personality, or to see him envisaged as an explorer of the individual's potentialities and resources. Thus his task would not lie in the diagnosis of a neurosis, but rather in

a description of the type of personality in which the neurotic symptoms were finding expression. For when all is said and done, diagnosis is a small part of the battle for all concerned. The psychological clinician must realize that his information is valid in its own right, and that it needs to be presented in such a manner that the therapist can best make use of it in planning for the patient's welfare. He must remember that his long suit lies in being able to answer the question, "What personality resources does this patient possess?" developing, if necessary, new categories, new patterns of personality, new clinical entities, if his material so demonstrates.

Because of our inevitable lack of orientation in the medical and psychiatric fields, we as psychologists are only just reaching the point where we can refrain from the attempt to fit our findings into the pre-existing pigeonholes; where we are realizing that our task lies in presenting our material in a way that does least damage to it.

In the same way, the psychological clinician, in his role of explorer or surveyor, must have reached a point of belief in his own materials and his own capacities so that he is unabashed to report negative findings, where necessary; and he is willing to report his failure to detect clinically suspected trends without feelings of guilt and insecurity. He must realize that his recording cameras, so to speak, are often set at different angles from those of the psychiatrist, and therefore that his picture of the person under scrutiny may look different, and that often the very discrepancy between the two pictures may be important in assessing the total personality.

III. A psychologist may be considered clinical when he has lost his experimental rigidity sufficiently to realize that at any moment more relevant material may be elicited in relation to a particular patient by a complete break in or change of technique; when he knows that the rules for administering a test are not ends in themselves; when the detailed recording of a single failure to a given problem becomes of paramount importance and is never dismissed as an item merely "not completed in the allotted time;" when he is willing to replace the demanding quantitative deity he has worked for as an experimenter and at whose feet he has poured endless libations of statistics, by the humble, qualitative hunch; when he is willing to give full weight to a single slip of the tongue in an answer, despite its correction to one which is technically acceptable.

IV. A psychologist may be considered clinical when, before he utilizes a new test instrument, he is willing to see himself as primary source material, subjecting his own performance to the scrutiny of a recognized expert; when he can refrain from envisaging his own performance as the norm, or the good, or the center of the universe from which all others deviate, so that all persons resembling himself are automatically white-washed and those most sharply deviant in personality type considered

more seriously disturbed; when he is willing to take a good look at his own weaknesses, to seek out his own blind spots, and to relate these inadequacies to his evaluation of the personalities of others; when he ceases to have, or preferably, has never had, the attitude that a psychologist is in essence a glorified examiner, a being apart, a *deus ex machina*, an individual forever sitting in judgment on some sort of sub-species, the patient; when he is willing to say, with John Bradford in the 16th Century, "There, but for the grace of God, go I."

V. In the fifth place, a psychologist may be considered clinical when he has sufficient perspective to select the relevant type of investigation for the problems presented by the particular patient; when he has made sure that he can relate his findings to the actual problem confronting the physician; when he has assumed some responsibility for the education of his medical colleagues in areas which, though routine to him, are new to them; when he will present, whenever possible, copies or samples of the specific performance of his patient, and allow himself only the types of conclusions and generalizations which can be understood from the material which he presents. Most important of all, when he is able to communicate his findings in an intelligible fashion, without recourse to high-sounding technical clichés from textbooks, the meanings of which he is actually uncertain of himself. This problem is, to my mind, all-important. Slowly, in the course of attempting to bridge a gap between disciplines, one realizes the tremendous waste in meaning which takes place. Nowhere is the psychologist's anomalous position more clearly demonstrated, or the failures in a medical education which leave out some type of psychological orientation more clearly shown. The psychologist resorts to technical jargon largely because he is unable to say in plain English what his findings mean, even to himself. He has had, that is, a textbook orientation and lacks real clinical experience even in his own field. He is afraid to use medical terminology because he feels insecure and self-conscious in it.

Let me caricature a not unusual comedy of errors. The scene is laid in any hospital in which the psychologist is attempting to find his place without having clearly before him his goal, his responsibilities, a knowledge of his place on the team. The intern, who has been asked to have the patient examined psychologically, translates these instructions into, "I want an I.Q. on this patient; they're going to discuss him on ward rounds." Since the intern has had no training in psychology, this vagueness is inevitable. The psychologist takes this request at its face value, and reports correctly, but in this case misleadingly, "I.Q., 100," without explanation of the all-important additional fact that "there is a considerable amount of scatter between the sub-tests."

The intern, ignoring the last sentence, reports at ward rounds, "The patient is normal; psychological examination negative." A psychiatrist in

the group may look sceptical and ask if a Rorschach has been done. The intern (this is in the days before the famous film, *The Dark Mirror!*) makes a note to "get a raw something done" or alternatively, "one of those shock tests." The psychologist administers the Rorschach, and again speaking in his foreign language reports, "This patient shows W, 20%; D, 20%; Dd, 60%; F—, 50%; no M or FC; color shock on Card II." This technical monstrosity is read off by the intern next day, and needless to say, no one is any the wiser.

At this point, two psychiatrists may disagree with regard to the patient's relationship to reality, and the psychologist is asked point blank to pronounce him either neurotic or psychotic. On the spot, and feeling grossly insecure, he remembers Rorschach's pronouncement that when color shock is found in a record, there can be no question of a psychosis. He makes a blind stab and pronounces the patient neurotic. When the patient several days later is transferred to a psychiatric hospital, the intern feels justified in remarking, "I certainly can't see any point in getting a patient psyched; first they say the man is normal, then he's neurotic, and all the time the guy's nuts!"

Ten years ago, the spectacle of the psychologist knocking for admittance at the pearly gates of the medical world was a novel, if not a startling, sight. It evoked frankly raised eyebrows among psychological colleagues, who saw one as a renegade, automatically lost to science and research. The medical St. Peters who cautiously opened the door were kindly and tolerant, but were puzzled as to what to expect from or offer to their lay visitor. Even the psychologist himself was none too sure of his mission, for without the household word of psychosomatic medicine or the concept of the projective techniques, his place in the hospital set-up, his mode of attack on problems, was nebulous. To those of us who experienced these groping, tentative, but challenging years, the sudden shift of the wheel of fortune which has precipitated Clinical Psychology into the position of a vocational best-seller is almost breathtaking.

All over the country, as we know, universities are trimming their courses or augmenting their catalogs to meet the growing demand of students for systematic training in this field, and as a result, academic psychologists without hospital experience and with no orientation whatsoever in the field of therapy are having incongruous demands made on them. It is clear that we are at an important point in the development and crystallization of a profession. Clinical Psychologists are in demand, and in future they will arrive at the scene of action with the knowledge that they are specifically trained for the task at hand. Clearly, the *relevance* of that training is all-important; and to my mind cannot come from a psychological orientation alone. It must include the ideas, criticism, co-operation, and support of our medical colleagues.

INTELLIGENCE AND PERSONALITY CHARACTERISTICS OF CORRESPONDENCE TEACHERS

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STUDIES of the characteristics of successful teachers, from the pioneer monograph of J. L. Meriam¹ in 1906, until A. S. Barr² reviewed the literature of the subject thirty-four years and over thirty investigations later, consistently show personality to be the biggest single factor determining effectiveness in teaching. As sophisticated techniques for rating personality were developed, it was hoped that particular types of personality, as revealed by inventories such as those used to measure introversion-extroversion, dominance-submission, masculinity-femininity, would be shown to have predictive value for teaching aptitude. In general, however, scores on such inventories correlated more poorly with ratings on teaching effectiveness than did the naive personality ratings of early investigators. Nevertheless, these studies did serve to draw attention to the importance of a teacher's personality in relation to his professional success. Consequently, when a study was made of factors conducive to teaching success in correspondence education, careful attention was paid to personality and related attributes.

This study was made at the Correspondence School Branch of the Alberta Department of Education during the winter 1945-46. At that time there were employed in the Branch some eighty-five full-time teachers divided among three sections; elementary, junior high school, and senior high school. Staff members of all three sections worked in a single large office under conditions of extreme crowding. Under such conditions personal-social adjustments were continuous and not always complete.

As for the operation of selection in setting up the correspondence school staff it might be pointed out that in the early days of the school, from 1939 to 1942, teachers were selected largely on the basis of successful classroom experience. However, as the war produced a progressive shortage of teachers, the correspondence school enrolment mounted rapidly at the very time when additional staff was hardest to locate. The criteria for selection were necessarily relaxed. Teachers sought the job, rather than the reverse, and while every effort was made to avoid engaging fugitives from the classroom, there can be little doubt that a small minority sought the posts because they expected to find the correspondence school more congenial than the classroom.

¹J. L. Meriam, *Normal School Education and Efficiency in Teaching* (New York: Columbia University, 1906).

²A. S. Barr, "Recruitment for Teacher Training and Prediction of Teaching Success" (*Review of Educational Research*, 10, 1940, 185-90).

To study the personal-social adjustments of the teachers a number of techniques were used. One of these was the sociometric test, as developed by Moreno³ and Jennings.⁴ In the form used in this study, the teachers were asked to complete the following questionnaire:

Assume that the desk arrangement of your section is to be changed, and that you are to occupy a desk away from the walls of the room. Please indicate in the space below the teachers in your section whom you would be happiest to have sit on either side of you. *Please do not include your supervisor.* However, you need not confine yourself to teachers of your own grade or subject-matter when making your choices.

Choice I _____

Choice II _____

From the answers obtained, sociograms were constructed by plotting the names of the teachers involved and drawing arrows to indicate the choice of one teacher for another.

Another form completed by the teachers was called a "Job Satisfaction Questionnaire." In part, it read as follows:

In his study of factors conducive to success in correspondence education, the Director of the Correspondence School Branch finds that he needs to know just how the teachers in the Branch feel about the work they are doing, and whether they are happy in it (not considering remuneration, of course). Will you therefore please fill out this form as honestly as possible, and return it to your section supervisor?

Place a check mark in the space provided for the statement that most nearly fits your case.

- _____ I find that my present position is the most absorbing that I have ever held, and I don't think that I could ever find another that I should like better.
- _____ I definitely prefer this type of work to classroom teaching.
- _____ This work holds about the same degree of interest as does classroom work.
- _____ If circumstances were different (location of home, facilities for university study, etc.), I should prefer to teach in a regular school.
- _____ I dislike this work very much.

In addition, two standardized instruments were used. The first was the *Otis Self-Administering Test of Mental Ability, Higher Examination, Form A*; the second was the *Minnesota T-S-E Inventory*, which purports to measure thinking, social, and emotional introversion-extroversion. Earlier I-E inventories had proven disappointing as instruments to differentiate good and poor teachers. Often, indeed, different I-E inventories gave widely divergent results on the same subject. However, the Guilfords,⁵ after studying, by factorial analysis methods, the scores obtained on various I-E inventories, concluded that such inventories really measure several types of introversion-extroversion, as well as other factors.⁶ There-

³J. L. Moreno, *Who Shall Survive?* (Washington: Nervous and Mental Disease Publishing Company, 1939).

⁴H. H. Jennings, *Leadership and Isolation* (New York: Longman's, Green and Company, 1943).

⁵J. P. and R. B. Guilford, "Personality Factors, S, E, and M, and Their Measurement" (*Journal of Psychology*, 11, 1936, 109-27).

⁶J. P. and R. B. Guilford, "Personality Factors, D, R, T, and A" (*Journal of Abnormal and Social Psychology*, 34, 1939, 21-36).

fore a new measure of I-E was developed, as reported by Evans and McConnell.⁷ This inventory presupposes that I-E can be broken down into three separate factors—social, emotional, and thinking I-E, each independent of the others. Scores on this Minnesota T-S-E Inventory and grades earned in practice-teaching have been correlated, and the results reported by Evans and Wrenn.⁸ Their conclusions are that there is a definite relationship between thinking introversion and high scholastic achievement, and that social and emotional extroversion are associated positively with teaching success.

Additional data were available on the correspondence teachers, such data as age, sex, marital status, academic achievement, ethnic background, etc.

INTELLIGENCE OF CORRESPONDENCE TEACHERS

Sixty-five teachers in the Branch wrote the Otis Test. The mean score and standard deviations were respectively 62.55 and 6.89. The mean for the 2,516 college students on whom the test was standardized was 53, no S.D. reported. A study of the relative cumulative frequency (percentile) curves for both the standardizing population and the correspondence teachers indicates that the test lacks "top." This is especially true for the teachers. Ninety-one per cent of the teachers scored higher than the median score of the college students. Such a result is to be expected in view of the greater number of screenings that the teachers have undergone, such as graduation from a normal school or university, and appointment to the Correspondence School Branch.

INTROVERSION-EXTROVERSION OF CORRESPONDENCE TEACHERS

Seventy-five teachers completed the Minnesota T-S-E Inventory. This inventory was standardized on the basis of the scores of 400 freshman and sophomore students at Indiana University. As norms are in the form of percentiles only, means and standard deviations have not been computed for the correspondence teachers.

Thinking Introversion-Extroversion. The distribution of scores for correspondence teachers indicates that the Minnesota Inventory has adequate range, in contrast with the Otis Test, which is not sufficiently difficult at the upper end.

Evans⁹ defines the thinking introvert as one with a liking for reflective and abstract thought, less influenced by objective conditions than is the extrovert. The correspondence teachers seem to be much more intro-

⁷C. Evans and T. R. McConnell, "A New Measure of Introversion-Extroversion" (*Journal of Psychology*, 12, 1941, 111-24).

⁸C. Evans and C. G. Wrenn, "Introversion-Extroversion as a Factor in Teacher-Training" (*Educational and Psychological Measurement*, 2, 1942, 47-58).

⁹C. Evans, *Preliminary Manual for the T-S-E Inventory* (Chicago: Science Research Associates, no date).

verted than the college students in their thinking, their respective medians being 106 and 125. Eighty per cent of the teachers fall below the median for the college students, and 52 per cent are below the latter's first quartile.

Possibly the teaching profession attracts more thinking introverts than it does extroverts; no doubt also the correspondence school situation, with its lack of face-to-face contacts between student and teacher, and greater emphasis on reflective thinking, as compared with the classroom situation, is more appealing to the thinking introvert than to the extrovert.

Thinking Introversion and Intelligence. Sixty-one teachers wrote both the Otis Test and the Minnesota Inventory. The coefficient of correlation of the scores on these two instruments was $-.355$, with a standard deviation of $.110$ and a critical ratio of 3.20 . These figures indicate a low but statistically significant negative correlation between intelligence scores and thinking introversion-extroversion scores. Had the Otis Test possessed a higher ceiling, the correlation might have been materially higher. It should be noted that in each of the categories—thinking, social, and emotional—a high score indicates extroversion and a low score introversion.

Social Introversion-Extroversion. According to Evans, the social introvert withdraws from social contacts and responsibilities, displaying little interest in people, while the social extrovert seeks social contacts and is primarily interested in the people. The correspondence teachers appear to be very slightly more socially introverted than are the college students on whom the test was standardized.

Emotional Introversion-Extroversion. Evans characterized the emotional introvert as one who inhibits the outward expression of emotions, whereas the extrovert makes the expected response to simple, direct, emotional appeals. Teachers appear to be more extroverted in their patterns of emotional behaviour than are the college students, as 67 per cent of the former scored above the median of the latter.

SOCIOMETRIC PATTERNS

The sociometric patterns found in this study were in many respects similar to those discovered by Moreno and Jennings. In all three sections there appeared isolates, chosen by no one, and leaders, arbitrarily defined for the purposes of this study as those chosen by more than 12 per cent of their section mates. There are also chains, each subject in which is linked to the one nearest him, sociometrically speaking, by mutual choices; and many mutual pairs.

SOME CHARACTERISTICS OF LEADERS AND ISOLATES

In Tables I and II are summarized some of the characteristics of leaders and isolates. Under the heading of "Leader" or "Isolate" are the designations to identify the subjects. "Months in Branch" are the number of months of service completed in the Correspondence School Branch as of March 1, 1946. The values under "Job Choice" are arbitrary, having been assigned in descending order from 2 to -2. Age is as of February 5, 1946. The scores on the Otis Test appear under "Otis Score." Thinking, social, and emotional scores on the Minnesota Inventory appear under the appropriate headings. Figures in parentheses are percentile ranks based on the scores of all the subjects in the Branch. Information not available is indicated by "x."

As a group, leaders have much greater seniority (25.7 months) than do the isolates (10.5 months). However, one teacher has qualified as a leader with only one month of service and another with three, while three isolates have each seen over two years' service in the Branch.

The average of 1.08 on "Job Choice" score for the isolates indicates considerably more liking for their work than does the mean of 0.3 for the leaders. Among the thirteen isolates for whom data on this point are available, four indicate that their present position is the most absorbing they have ever held, and they do not think they could ever find others they would like better. Of the leaders, not one assumes this extravagant position, and three even indicate that they would prefer classroom to correspondence teaching. None of the isolates do.

Although the leaders average 5.8 years older than the isolates, the amount of overlapping is so great that there are insufficient grounds for believing age and social leadership to be correlated among the subjects of this study.

There is very little difference in the mean Otis scores for the two groups. The percentile ranks of the leaders range from 11 to 100; those of the isolates from 5 to 90.

On the basis of the average scores, isolates appear to be much more highly introverted than the leaders in their thinking, but one leader has a lower score than all but one of the isolates. The highest thinking score made by any of the isolates is at the fifty-second percentile for the Branch. Only two of the leaders have scores so low.

The leaders appear to be more socially introverted than the isolates, but each group runs from below the tenth to above the ninetieth percentile.

Emotionally the leaders seem to be considerably more extroverted than the isolates. The isolates have only two members above the forty-ninth percentile rank, while the leaders have only two below it.

TABLE I
SOME CHARACTERISTICS OF LEADERS

LEADER	MONTHS IN BRANCH	JOB CHOICE	AGE IN YEARS	OTIS SCORE	MINNESOTA SCORES*		
					T	S	E
A	45	1	38	x	108(52)	93(4)	53(20)
B	49	0	36	68(72)	118(71)	118(27)	60(49)
C	22	1	32	x	110(56)	135(50)	55(30)
D	38	-1	28	74(100)	68(8)	119(28)	67(76)
E	1	1	26	71(90)	x	x	x
F	63	1	40	64(44)	129(57)	102(8)	62(57)
G	15	1	50	59(19)	114(64)	155(92)	62(57)
H	10	-1	32	55(11)	121(45)	111(15)	57(36)
I	3	1	24	60(21)	127(82)	139(67)	85(98)
J	11	-1	34	59(19)	128(56)	158(94)	84(97)
MEANS	25.7	0.3	34.0	63.8	113.7	115.4	65.0
PERCENTILE RANK OF MEAN SCORES				43	63	23	69

TABLE II
SOME CHARACTERISTICS OF ISOLATES

ISOLATE	MONTHS IN BRANCH	JOB CHOICE	AGE IN YEARS	OTIS SCORE	MINNESOTA SCORES*		
					T	S	E
K	8	x	25	x	x	x	x
L	47	1	32	x	x	x	x
M	1	x	25	x	x	x	x
N	6	1	30	71(90)	105(48)	119(28)	45(9)
O	5	1	26	70(85)	64(6)	160(96)	73(87)
P	46	2	40	71(90)	93(29)	85(2)	42(7)
Q	0	x	26	x	x	x	x
R	5	2	22	69(80)	80(16)	60(1)	68(78)
S	2	1	24	61(26)	105(48)	133(55)	60(49)
T	4	1	20	x	x	x	x
U	25	2	28	67(66)	94(30)	130(50)	59(45)
V	2	1	30	x	x	x	x
W	2	0	24	67(66)	95(32)	166(98)	65(70)
X	13	0	50	48(5)	108(52)	119(28)	55(29)
Y	1	x	26	66(58)	x	x	x
Z	10	0	31	54(8)	89(24)	137(63)	46(11)
AA	2	x	25	x	x	x	x
AB	2	2	22	60(21)	97(35)	142(73)	39(7)
MEANS	10.5	1.08	28.1	64.1	93.0	125.1	55.2
PERCENTILE RANK OF MEAN SCORES				53	29	45	50

*Figures in parentheses are percentile ranks on basis of all scores of correspondence teachers.

In addition to comparing the social and emotional introversion-extroversion scores of leaders and isolates, there have been computed coefficients of correlation between the social and emotional scores and the number of times each teacher has been chosen on the Sociometric Inventory. Seventy teachers who completed the Minnesota Inventory were in the Branch at the time the Sociometric Inventories were administered. Between social and sociometric scores the correlation was $-.07$, with a standard deviation of $.12$ and a critical ratio of $.58$. Between emotional and sociometric scores the correlation was $.246$, the standard deviation $.111$, and the critical ratio 2.36 .

SUMMARY OF CONCLUSIONS

In general, the teachers employed by the Correspondence School Branch appear to be much above average in intelligence, definitely introverted in their thinking, about average in their degree of social introversion-extroversion or tendency to be interested in other people, rather extroverted emotionally, or tending to make the expected response to simple, direct emotional appeals. They do, however, vary within wide extremes, with the more intelligent appearing to be the more introverted in their thinking.

In a stable social situation they tend to form cliques, to defer to the leadership of some, to isolate others, much as children or adolescents do in similar circumstances. Leadership is not dependent on intelligence or on social introversion-extroversion. Leaders tend to be more extroverted emotionally and in their thinking than isolates, although this is not always so. Leadership tends to be conferred on those who are well known, but has been achieved within a matter of weeks. Leaders are not absorbed in their work to the exclusion of other interests; some isolates indicate that they might be.

THE HOME AND FAMILY BACKGROUND OF OTTAWA PUBLIC SCHOOL CHILDREN IN RELATION TO THEIR I.Q.'S.¹

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DR. FLORENCE S. DUNLOP has described the manner in which she obtained the I.Q.'s of Ottawa public school children in Grade IV over a period of ten years, and made available other data from their school record cards.² My particular interest in these records lay in the possibility of relating them to the home and family circumstances of the children, by using the information of the decennial census on home and parents.

The test records were obtained over a period of ten years, 1933 to 1942, whereas the census records were for a single year, 1941, near the end of the period. There was consequently a span of eight years between the testing of the first children and the recording of family circumstances, but of not more than three years in the case of the later half of the children.

I

Table I divides the 9956 children into four broad I.Q. groups and gives certain items of information on homes, mothers, and fathers for each. The grouping was determined by reference to the mid-point in the distribution of I.Q.'s which, as Miss Dunlop has explained, was 109. Two groups were made to include twenty points each, one above and one below the median (110-129 and 90-109); and two others to include respectively 130 and over, and under 90.

Contrasts in homes and families between the high and low groups are striking. Of the 913 children with the highest I.Q.'s (130 or over) 44.3 p.c. lived in homes owned by their parents, with an average value of \$5,448; of the 1,250 with lowest I.Q.'s (under 90) only 22.9 p.c. lived in homes owned by their parents, and the average value was \$3,700. The average monthly rental paid on the other homes of the high-testing group was \$38.10; for the low-testing group, \$24.10.

The homes of the more-favoured group averaged almost one room larger, although there were decidedly smaller families to live in them. The actual number of persons in the homes was not tabulated for the purpose of this study, but instead the number of children that had been born to the mothers, and this provides an indication of the relative size of household. The mothers of the high-I.Q. group had had an average of 3.2 children each and were 42.7 years of age; the mothers of the low group had had 5.3 children, and were 43.5 years of age.

¹Paper read at the Annual Meeting of the Canadian Psychological Association, Ottawa, April, 1947.

²See the *Canadian Journal of Psychology*, 1 (2), June, 1947, 87-91.

Judging by the father's earnings there was nearly three times the annual income per person in the families of the children with high I.Q.'s. The year's earnings of the fathers (at least those on salary or wage, and these included three-fourths) averaged \$2512 for the five-member families of the high-testing children, or something like \$500 per person; the corresponding earnings of the fathers in the seven-member families of children with low I.Q.'s were \$1244, or about \$175 per person. Rather more of the mothers in the latter group were adding to the fathers' earnings (6.5 p.c. were gainfully-occupied as compared with 4.3 p.c. in the former group), but their average earnings were lower.

TABLE I

HOME CONDITIONS OF OTTAWA PUBLIC SCHOOL CHILDREN
CLASSIFIED ACCORDING TO I.Q. GROUPS

	I.Q. UNDER 90	I.Q. 90- 109	I.Q. 110- 129	I.Q. 130 & OVER	ALL GROUPS
NUMBER OF CHILDREN	1250	3944	3849	913	9956
In homes owned by parents... p.c.	22.9	26.3	34.2	44.3	30.7
Median value of owned homes	\$3700	\$4475	\$5116	\$5448	\$4916
In rented homes... p.c.	77.1	73.7	65.8	55.7	69.3
Median monthly rental	\$24.10	\$27.40	\$32.60	\$38.10	\$29.30
Median number of rooms in all homes	6.4	6.5	6.8	7.2	6.6
LIVING WITH:					
Both parents... p.c.	80.7	82.1	86.6	89.4	84.4
One parent... p.c.	17.1	15.8	12.4	9.4	14.0
Neither parent... p.c.	2.2	2.1	1.0	1.2	1.6
MOTHERS:					
Median number of children born	5.3	4.3	3.6	3.2	3.9
Median age	43.5	42.0	41.9	42.7	42.2
Median years of schooling	8.3	9.3	10.0	11.1	9.6
Gainfully employed... p.c.	6.5	6.5	5.8	4.3	6.0
FATHERS:					
Median annual earnings	\$1244	\$1442	\$1806	\$2512	\$1650
Median years of schooling	8.3	9.2	10.2	11.3	9.7
Occupations:					
Labourers... p.c.	24.6	15.8	7.7	2.7	12.3
Operatives... p.c.	20.0	16.0	11.4	5.3	13.6
Craftsmen... p.c.	30.0	28.2	21.3	15.2	24.5
Clerical... p.c.	10.5	14.7	21.0	20.8	17.3
Commercial... p.c.	4.2	7.1	8.5	9.3	7.5
Business owners... p.c.	8.4	12.5	16.4	23.9	14.7
Professional... p.c.	2.3	5.5	13.7	22.8	10.1

The fathers of the high-testing children, like their mothers, had had about three years more schooling than the parents of the low-testing group (eleven years instead of eight). This is no doubt related to the fact that they were able to occupy better-paying jobs. A classification of the occupations of fathers, indicating something of the length of training involved, shows for the children with high I.Q. 22.8 p.c. professional and 27 unskilled labour, with these proportions roughly reversed for the children of low I.Q.

The low-testing children much more frequently came from broken homes, 17.1 p.c. of them living with one parent only, as compared with 9.4 p.c. of the high-testing group. More, too, lived with others than their parents, though the proportion is small in both cases.

It is tempting, if futile, to speculate what might have been the effect on I.Q.'s if the environmental factors we have mentioned in the lives of the two groups of children had been reversed. Supposing an exchange of circumstances had reduced the high scores by ten points and increased the low scores by like amount, they would of course still have represented two distinctly different I.Q. groups—above 120 and under 100.

In all of the characteristics thus far noted, as Table I shows, the children with I.Q.'s between 90 and 130 occupy an intermediate position. In fact there is a consistent gradation from the first to the fourth level—the higher the I.Q., the greater the size and value of the home, the fathers' earnings, the length of the fathers' and mothers' education, and the smaller the family.

II

When the children's I.Q.'s showed such definite relationships with parental circumstances and home surroundings, it seemed profitable to go one step further and look for relationships between the I.Q.'s and the antecedents of the parents. This is done in Table II. Different cultural, ethnic, or national origins are bound to make for differences in the children's milieu, although one would scarcely look for differences as pronounced as those attending, say, wide discrepancies in income.

The record of origins shows Scottish, Hebrew, and English parents contributing more than their expected proportion of children with high I.Q.'s, and the former two less than their share of children with low I.Q.'s. Irish proportions are slightly low at both extremes. With parents of European origins the relationships are the opposite of the Scottish and Hebrew, although this is a generalization covering a number of small ethnic groups that show considerable differences.

When birthplaces are considered, the parents who have migrated to Ottawa from the more distant provinces and from the United States are seen to have contributed more than their expected share of high I.Q.'s. This does not hold for immigrants from the British Isles, although neither have they contributed disproportionately to the low I.Q.'s. Scotland as a place of birth does not equal its record as a place of earlier origin.

Parents with a farm background show a less satisfactory record than those from urban communities.

TABLE II
ANTECEDENTS OF PARENTS OF OTTAWA PUBLIC SCHOOL CHILDREN
CLASSIFIED ACCORDING TO I.Q. GROUPS

	NO. OF CASES	I.Q. GROUPS				
		UNDER 90	90- 109	110- 129	130 & OVER	ALL GROUPS
		p.c.	p.c.	p.c.	p.c.	p.c.
MOTHER'S ORIGIN:						
English	3150	39.7	39.5	40.8	41.6	40.3
Scottish	1446	16.1	17.5	18.7	24.8	18.5
Irish	1589	19.4	20.8	20.9	17.0	20.3
Hebrew	497	3.7	5.6	7.5	7.9	6.4
European, etc.	1142	21.1	16.6	12.1	8.7	14.5
	7824	100.0	100.0	100.0	100.0	100.0
FATHERS' ORIGIN:						
English	2867	39.3	38.5	39.9	40.0	39.2
Scottish	1474	18.3	19.3	20.3	25.0	20.2
Irish	1480	19.1	20.8	20.5	18.1	20.2
Hebrew	472	3.5	5.6	7.7	8.1	6.4
European, etc.	1021	19.8	15.8	11.6	8.8	14.0
	7314	100.0	100.0	100.0	100.0	100.0
MOTHERS' BIRTHPLACE:						
Ontario and Quebec	5003	66.1	64.5	63.6	60.4	63.9
Maritimes and Western Canada	278	2.5	2.5	4.0	7.5	3.6
U.S.A.	218	1.4	2.4	2.7	6.5	2.8
British Isles	1658	21.1	21.7	21.1	19.7	21.1
Europe, etc.	667	8.9	8.9	8.6	5.9	8.6
	7824	100.0	100.0	100.0	100.0	100.0
FATHERS' BIRTHPLACE:						
Ontario and Quebec	4351	59.9	60.2	58.6	59.9	59.4
Maritimes and Western Canada	288	2.3	3.1	4.3	7.7	4.0
U.S.A.	159	2.2	1.8	2.2	3.4	2.2
British Isles	1717	22.7	23.1	24.6	21.5	23.5
Europe, etc.	799	12.9	11.8	10.3	7.5	10.9
	7314	100.0	100.0	100.0	100.0	100.0
MOTHERS' BIRTHPLACE:						
Farm	1097	15.3	15.6	13.3	9.8	14.1
Rural, non-farm	864	9.3	11.4	11.3	11.2	11.1
Urban	5830	75.4	73.0	75.4	79.0	74.8
	7791	100.0	100.0	100.0	100.0	100.0
FATHERS' BIRTHPLACE:						
Farm	1076	18.1	15.5	13.8	11.7	14.8
Rural, non-farm	789	10.0	11.6	10.6	9.7	10.8
Urban	5416	71.9	72.9	75.6	78.6	74.4
	7281	100.0	100.0	100.0	100.0	100.0

III

From what has been said above, and shown in Table I, there is an obvious relationship between I.Q. levels and size of families, a relationship to which Cattell a few years ago, and Burt more recently, have given some attention in England. If the underlying assumption of their work is sound, incidently, viz., that by and large it is the more intelligent parents who have the more intelligent children, Table I indicates that the more intelligent half of the Ottawa population represented in the public schools has not been reproducing itself (assuming, as is generally done, that four children per married woman are necessary for this purpose). These mothers averaged only 3.5 children, and the childless would reduce this average for all married women.

It accordingly seemed worth while to examine the records of the Ottawa children and the factors in their home life on the basis of family size. To do this the families were selected in which all children born to the mothers had been tested and given an I.Q. rating. These included 2691 children or about 27 p.c. of the total: 646 in one-child families, 806 in families of two children, 336 in families of three, and 879 in larger families—this last group including the third-, fourth-, and fifth-tested child of families in which not all were tested. Some of the one-, two-, or three-child families might eventually come into a larger-size category, but these would be the exception rather than the rule. In all three categories the mothers had been married sixteen to seventeen years and were forty to forty-one years of age in 1941 when the size of their families was counted.

In comparing the families it is necessary to remember that the records of the children are taken at a certain point in their school careers, viz., in Grade IV. The "only child" on the average is two months younger than the child in families of four or more, but is 1.3 inches taller and weighs 8.2 pounds more; his I.Q. is ten points higher; he repeats a grade only half as often, and the teacher rates his effort in school as considerably higher; in roughly two cases out of three he is ranked in the top half of the class, while substantially fewer than half of the children from the largest families are so ranked. The children in families of two or three occupy an intermediate position in all these respects, as may be seen by reference to Table III, those in families of two tending in most respects, except physical size, not to be different from the "only child."

The mothers and fathers of the smaller families had apparently done better in school themselves than those of the larger families, at least had obtained more schooling. Only 17 p.c. of the parents with only one child had less than eight years schooling, and 40 p.c. had twelve years or more. About 31 p.c. of the parents of largest families had less than eight years of schooling, 12 p.c. twelve years or more. The median year's earnings of fathers with one child only were \$1833; of fathers with four or more children, \$1362.

TABLE III
DATA ON OTTAWA PUBLIC SCHOOL CHILDREN OF FAMILIES IN
WHICH ALL CHILDREN WERE TESTED, CLASSIFIED
ACCORDING TO SIZE OF FAMILY

	1-CHILD FAMILIES	2-CHILDREN FAMILIES	3-CHILDREN FAMILIES	4- OR MORE CHILDREN FAMILIES*
Number of children included	646	806	336	879
Median chronological age..... yrs.	9.8	9.8	9.9	10.0
Median height..... ins.	54.6	54.0	53.9	53.3
Median weight..... lbs.	73.6	68.8	68.4	65.4
No physical defects..... p.c.	82.9	77.8	78.0	80.2
Median I.Q.	114.3	114.2	110.3	104.4
Repeated one grade..... p.c.	16.6	19.1	24.3	27.3
Repeated 2 or more grades..... p.c.	6.0	6.0	9.8	15.2
Ranked top-half of class..... p.c.	64.6	62.3	54.7	42.0
Effort above average..... p.c.	64.6	64.6	62.5	52.3
Effort below average..... p.c.	9.4	11.5	13.9	14.7
Median value, owned homes	\$5490	\$5300	\$6070	\$4210
Median monthly rental	\$36.10	\$33.70	\$29.00	\$26.00
Median number rooms in homes	6.4	6.6	6.9	6.8
Living with both parents..... p.c.	87.3	90.1	92.1	83.7
Median age of mothers:				
At marriage..... yrs.	24.0	23.3	23.3	21.0
When first child born..... yrs.	28.2	26.3	25.1	23.0
In 1941..... yrs.	40.6	40.1	40.9	42.0
Mothers' schooling:				
Under 8 years..... p.c.	17.2	14.9	17.9	39.3
8-11 years..... p.c.	55.6	59.0	60.6	51.6
12 years or over..... p.c.	27.2	26.1	21.5	9.1
Fathers' schooling:				
Under 8 years..... p.c.	17.0	16.0	16.9	41.5
8-11 years..... p.c.	47.9	55.6	54.4	44.4
12 years or over..... p.c.	35.1	28.4	28.7	14.1
Year's earnings, median	\$1833	\$1945	\$1828	\$1362

*Includes third- and fourth- and fifth-tested child in families in which not all children were tested.

TABLE IV
COMPARISON OF FIRST-, SECOND-, AND THIRD-BORN CHILDREN IN
OTTAWA PUBLIC SCHOOLS, IN FAMILIES IN WHICH
ALL CHILDREN WERE TESTED

	"ONLY CHILD"	1ST BORN OF 2	2ND BORN OF 2	1ST BORN OF 3	2ND BORN OF 3	3RD BORN OF 3
Repeating one grade..... p.c.	16.6	18.1	20.1	25.9	26.3	20.7
Repeating 2 or more grades..... p.c.	6.0	6.7	5.2	11.6	9.6	8.1
Rank top-half of class..... p.c.	64.6	65.2	58.0	63.4	50.5	50.5
Effort above average..... p.c.	64.6	67.0	62.3	76.9	50.5	62.6
Effort below average..... p.c.	9.4	11.5	11.5	11.0	18.9	11.2
No physical defects..... p.c.	82.9	73.2	81.9	69.2	79.3	84.1
Age when tested, median..... yrs.	9.8	9.9	9.7	10.1	9.9	9.6
Median height..... ins.	54.6	54.2	53.8	54.9	53.9	53.3
Median weight..... lbs.	73.6	69.5	68.1	68.7	67.1	66.2
I.Q. Under 70..... number	2	1	—	1	—	1
70-79..... number	4	6	2	2	4	2
80-89..... number	36	16	22	7	6	7
90-99..... number	87	50	56	18	16	16
100-109..... number	121	78	87	29	28	30
110-119..... number	170	103	102	19	28	24
120-129..... number	128	88	86	25	20	16
130-139..... number	68	41	33	7	10	11
140-149..... number	25	11	8	4	—	3
150 or over..... number	5	9	7	—	—	2
Total cases	646	403	403	112	112	112
Median I.Q.	114.3	115.0	113.5	110.0	111.0	110.0
10-90 percentile range	41.5	41.5	39.3	39.2	38.6	43.7

IV

An attempt was made to compare children on the basis of order of birth within the families in which all were tested, as shown in Table IV. This was not altogether satisfactory by reason of the fact that in the course of the ten-year period included in the study there was considerable general acceleration in the pace at which pupils passed through the lower grades. The younger children tended to be tested at an earlier age; the third-born children in families of three, for instance, were half a year younger when tested than were the first born.

A reduction in the proportions repeating grades as between younger and older children would be explained by the school system, and is shown for the third-born. But it does not appear for the second-born, and on other evidence provided by the teachers the second child in families of two and three does not perform up to expectations. His effort is rated considerably lower than that of either the first-born or third-born, and his rank in class is significantly lower than for the first-born. This is in spite of the fact that he is more frequently reported in the school health examination to be without physical defects.

There is little else, however, that suggests significance in the comparison of siblings, unless it is the greater range of I.Q.'s among first-born than among second-born. In families of two particularly there are more cases of extremes, both high and low, in the older child; there is 2.2 points difference in the 10-90 percentile range in these families, but a difference of only .6 in the same range for the first- and second-born in families of three. The range among third-born is greatest of all but this may be related to the fact that they were younger when tested.

STUDIES IN INTERNATIONAL MORSE CODE

V. THE VIMY ADAPTATION OF THE CODE-VOICE METHOD FOR INITIAL INSTRUCTION IN MORSE CODE RECEIVING

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THE SIMPLEST WAY to learn code is to memorize the Morse equivalents of the alphabet and numerals. This method has the advantage of requiring no instructor and no equipment, but is clearly possible only for students with exceptionally high motivation and unlimited time. In the preliminary stages of this rote method actual code sending cannot be recognized and the student builds up a mental image of dots and dashes rather than of the sound pattern for each character.

Probably the simplest classroom technique is that in which the instructor sounds a character repeatedly on a key and the class chants its identification, or where he names a character, say "C," and the class replies by chanting "da-di-da-dit." Checking the progress, attention, or response of individual members of the class is impossible under either of these systems, and in the latter no introduction to key sounds is given.

A course requiring more elaborate equipment is one in which the character is sounded by key and then projected on a screen. Here again individual response cannot be known, and it is possible that the visual aid is an extraneous complicating factor of little value.

In the Z-tape method, formerly standard with the United States Army, the student listens to tape-sent characters over a headset. He guesses each character as it is sounded.

In the Code-Voice Method, as developed by Keller, the student is equipped with a headset through which he can hear the instructor's voice and key. The instructor sends a code character which the student attempts to identify and write down during a three-second pause. At the end of the pause the instructor names the character phonetically before sending the next. At first "doubles" runs are sent, in which each character is given and identified twice successively. Later, "singles" runs, and finally "five-word-per-minute" runs (in which no characters are identified until a complete run has been sent) are given. Three runs, each totalling 100 characters, are sent in each instructional period after the second.

The Code-Voice Method makes maximum use of training time. The student is introduced to code by listening to actual code sending, and is thus most rapidly prepared for later receiving messages in code. Since each student writes down the code characters he hears, it is possible to obtain an objective rating of his progress at any time.

Good motivation is perhaps the most important success factor with men who have been selected as potential operators. The Code-Voice Method is largely free of boring, repetitive drills common to other systems and a maximum of attention is obtained as the student seeks to identify each character presented. Again, he is encouraged during the beginning stages by the doubles runs, in which, since the student knows each character will be repeated twice in succession, it is always possible to identify half the characters and obtain a score of 50 per cent.

Some code teaching systems introduce the characters by emphasizing their constituent dots and dashes and pointing out that certain characters are opposites of others (e.g. Nan —. and Able.—). It has been found that this is apt to lead to confusion at a later stage. The Code-Voice teaches each character as a sound pattern transmitted by a key, placing no emphasis on the constituents but endeavouring to build up a recognition for the sound pattern as a whole. It is also notable that the characters given in the Code-Voice runs are twenty-word-per-minute characters, though the spacing between them is much greater than this implies, and are thus identical in sound with the characters the students will be receiving at an advanced stage of training.

Since the Code-Voice trains by using actual code sounds, it is possible to eliminate, at a very early stage, the small percentage of men who cannot distinguish between dots and dashes in the characters and thus would never become code operators.

The use of the Code-Voice system exactly as worked out in the United States produced good results in Canada, the majority of classes being able to receive code at five words per minute after twenty-two periods.

Certain modifications were suggested, however, in order to develop a course more closely adapted to Canadian requirements. The indiscriminate mixing of numerals and letters in the runs was thought to be unnecessary. It introduced a complicating factor into the initial training, since the student had to differentiate between thirty-six sound patterns, a harder task than distinguishing between patterns in two series of twenty-six and ten respectively. In the revised Code-Voice Method the letters and numbers are taught separately. This permits of a more thorough learning of knowledge the army operator will later require.

In the original Code-Voice the characters in singles and in five-word-per-minute runs are repeated with equal frequency. In the doubles runs frequency of presentation varies from 101 for T to 218 for P. As far as could be ascertained the frequencies used showed no close correspondence to any available study of the relative difficulty of Morse characters.

It was suggested that the characters should be presented throughout the course with a frequency proportional to their difficulty. The hard characters are then learned more rapidly and unnecessary repetition of

easy characters is avoided. Consequently, in the Vimy Adaptation of the Code-Voice, the frequency of presentation varies from 29 for the five easiest characters O, 5, M, E, T (as determined by comprehensive error studies) to 402 repetitions for F, the most difficult character.

It was thought advantageous also to use the "snowball" method, in which a small group of characters is given at first and then other groups are added to this, rather than to introduce the characters all at once. The frequent paired repetition of often-confused characters was also avoided as adding a needlessly confusing element in the early stages of training.

Another innovation was the placing of the entire Vimy Code-Voice course on phonograph records to ensure standardization of presentation. By using records the instructor is left free to devote his time to supervision.

After one week of training, a typical class of twenty men with no previous experience in code was given a four-word-per-minute test. Results showed a class average of 98.3 per cent accuracy. A second class of thirteen men, trained on the revised Code-Voice, obtained an average accuracy of 96.4 per cent after one week. At the same time two other classes of nineteen students and eight students, trained on the original Code-Voice, obtained class averages of 89.7 per cent and 86.9 per cent respectively. Though the numbers in the classes are not large enough to justify any claim to reliability of results, they at least suggest that the revised system is superior.

BOOK REVIEWS

Play Therapy: The Inner Dynamics of Childhood. By VIRGINIA MAY AXLINE. Boston: Houghton Mifflin Company. 1947. Pp. xii, 379, \$3.50.

PLAY THERAPY is a well written exposition of the principles and philosophy of non-directive counseling as exemplified in the counseling of children through play, the child's natural medium of self-expression. Based upon the assumption that the individual has within himself, not only the ability to solve his own problems satisfactorily, but also the growth impulse that makes mature behaviour more satisfying than immature behaviour, non-directive play therapy offers the child an opportunity to experience growth under certain favourable conditions.

The eight basic principles which guide the therapist in all non-directive therapeutic contacts are stated as follows:

1. The therapist must develop a warm, friendly relationship with the child, in which good rapport is established as soon as possible.
2. The therapist accepts the child exactly as he is.
3. The therapist establishes a feeling of permissiveness in the relationship so that the child feels free to express his feelings completely.
4. The therapist is alert to recognize the feelings the child is expressing and reflects those feelings back to him in such a manner that he gains insight into his behaviour.
5. The therapist maintains a deep respect for the child's ability to solve his own problems if given an opportunity to do so. The responsibility to make choices and to institute change is the child's.
6. The therapist does not attempt to direct the child's actions or conversation in any manner. The child leads the way, the therapist follows.
7. The therapist does not attempt to hurry the therapy along. It is a gradual process and is recognized as such by the therapist.
8. The therapist establishes only those limitations that are necessary to anchor the therapy to the world of reality and to make the child aware of his responsibility in the relationship.

Each principle is discussed with specific, and in most cases verbatim reports of the developing relationship between child and therapist in both individual therapy and group therapy.

The implications for education as set forth under the headings *Practical Schoolroom Application*, *Application to Parent-Teacher Relationships*, and *Application to Teacher-Administrator Relationships* provide a stimulating challenge to educators. One case presented describes what a teacher-therapist actually did to help a handicapped child who was a pupil in her classroom. Whether the teacher can at the same time, and in all circumstances, be both teacher and therapist is, in the mind of the reviewer, open to question. It is understood that the teacher may make use of insights gained through an understanding of the principles of therapy and that many of her contacts with children may be therapeutic in character, but it is difficult to see how she can always preserve harmony

between her two roles, particularly in group situations. Surely there will be times when, as a teacher in charge of a class of thirty pupils, she will need to give more direction and assume responsibility for greater control than is suggested in the eight basic principles.

In addition to its use by clinicians, or for any course in counseling, this book will prove valuable in courses in general psychology, child psychology, and educational psychology. Through a generous use of verbatim reports Miss Axline has had the wisdom to let the children speak for themselves and thus aid us in our search for an understanding of the Inner Dynamics of Childhood.

Toronto.

ELEANOR R. LONG

Personality and Its Deviations. By G. H. STEVENSON and LEOLA E. NEAL. Toronto: The Ryerson Press; Springfield, Ill.: Charles C. Thomas. 1947. Pp. 365. (\$4.00)

RIGHTLY or wrongly, many things in the field of medicine are being accredited to the influence of World War II. Among those which are indisputable, however, is the concept of the neuropsychiatric team and the realization on the part of psychiatrists of the benefits to be derived from the collaboration of that closely-allied discipline, psychology. It is an interesting sign of the times, therefore, to find this collaboration expressed in joint authorship of a psychiatrist and psychologist in a work on *Personality and Its Deviations*. Even if the proportion, in terms of chapters, gives to the psychiatric author by far the greater share and responsibility in the work, yet, if one is to take their "we" literally, it would seem as if all important points have been arrived at jointly and are an expression of common opinion arrived at from different viewpoints.

As for the purpose of the book, the authors clearly state that they are writing for students in psychology and medicine, and for "those persons not registered in university courses who are genuinely interested in the understanding of behavior in its personal, inter-personal, and international aspects." With the exception of very few paragraphs, it seems to this reviewer that this audience is catered to relevantly and with an insightful appreciation of their background.

This book is characterized by a lack of stereotyped patterning, and a lack of adherence to the more obvious classifications. The titles of the four parts, "Construction of Personality," "Motivation of Personality," "Disorganization of Personality," and "Conservation of Personality," show, in themselves, a fresh approach. The authors do not hesitate to express novel, if not revolutionary, points of view.

The authors' balanced and essentially optimistic outlook is exemplified in such statements as the following:

With a favorable environment and the learning and practising of good mental health habits, nearly everyone should be able to maintain reasonably good mental health, and no one is so under the control of his genes that he is doomed to mental disease. . . .

We can remove many of our emotional biases by self-study and self-education and by making broad and large comparisons of ourselves with others.

To this reader, the material in Part II, under the heading of "Motivation of Personality," is not such a natural whole as are the other subdivisions. Although the two strictly-speaking psychological chapters are competently handled and well-written, they do not seem to be "demanded" by the material just at that point. The very short chapter on "Instincts and their Deviations," only three-and-a-half pages, is a somewhat disappointing counterpart to the preceding one, "Emotions and their Deviations." There is a good discussion of those emotional disturbances which "affect not only physical health but also certain aspects of mental health, notably the way people think," namely, the mechanisms of Compensation, Identification, Projection, Introjection, Rationalization. The chapter devoted to "Race Preservation and Psychosexual Development" is unusually straight-forward and clear.

"Personality Measurement" and "Intelligence and Intelligence Testing" are excellent presentations of the psychologist's tools and equipment. What might well have been omitted, in our opinion, is the lengthy and rather technical classification of mental deficiencies as quoted from H. W. Potter, and what is lacking is an example of the actual fusion of the two disciplines, a description of a case evaluated psychiatrically and psychologically with an emphasis on those features which can be brought to light par excellence by psychological evaluation.

Part III contains three excellent chapters, "Delusions and Hallucinations," "Deviations of Consciousness and Memory," and "The Mentally Sick Personality." The rationale for the choice of the term "delirium" rather than "psychosis" seems to us an unusually interesting contribution. The contrast between schizophrenia and the manic-depressive delirium is well made.

Into the final two chapters in Part IV, "Conservation of Personality," goes much of the authors' constructive thinking. Throughout the book, and perhaps epitomized in Part IV, is an excellent appraisal of the contribution of psychoanalysis.

The authors of this book have something to say and they say it well. This is not a volume which pretends to be an encyclopaedic handling of the problem. What is said, however, is the result of well-digested thought which, in turn, is thought-provoking. Perhaps the most serious omission is not one for which the authors have consciously made apology: there is no index. The book deserves one!

MOLLY HARROWER

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CANADIAN PSYCHOLOGICAL ASSOCIATION

Annual Meeting

The seventh Annual Meeting of the Canadian Psychological Association will be held in Winnipeg, at the Fort Garry Hotel on May 27th, 28th, and 29th.

Call for Papers. Members are invited, as usual, to contribute papers, reports of research, etc., to the programme. Since the Programme Committee is particularly desirous of receiving word as soon as possible of such prospective contributions, each member is requested to inform the Chairman at the earliest convenience as to the subject or approximate title of any paper he wishes to present at the meeting.

Chairman of Programme Committee:

Professor H. W. Wright,
Department of Philosophy and Psychology,
University of Manitoba,
Winnipeg, Man.

